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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,816	07/16/2003	Darrell Epperson	2867-070A	8769
27820	7590	01/27/2006	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			APPIAH, CHARLES NANA	
P.O. BOX 1287			ART UNIT	
CARY, NC 27512			PAPER NUMBER	
			2686	

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,816

Applicant(s)

EPPERSON ET AL.

Examiner

Charles N. Appiah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7,9-15,17-22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7,9-15,17-22 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Double Patenting***

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 5-7, 12, 13, 20-22, 25 and 26 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-4, and 7-11 of prior U.S. Patent No. 6,701,138. This is a double patenting rejection.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 2-4, 9-11, 17-19, 24, and 27-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,701,138. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claims of the instant application are encompassed by the limitations of the patent and as such it would have been obvious to one of ordinary skill in the art to implement the invention of the claims of the instant application using the claims of the patent.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 2-4, 9-11, 17, 18, 19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by **Kornfeld et al. (5,442,322)**.

Regarding claims 2 and 17, Kornfeld discloses a power amplifier configuration and a semiconductor implementing a power amplifier configuration (see Fig. 5), comprising: a power control circuitry (11-17) including a power regulator (11), providing an output voltage at an output node responsive to an adjustable power control signal (output of amplifier 3), power amplifier circuitry including an input amplifier stage (1), in series with an output amplifier stage (3), for amplifying a radio frequency signal (6), the input amplifier stage receiving power from a fixed voltage node (V_{DD} input into amplifier

1), and the output amplifier stage receiving power via the output node of the power regulator (input VDD into amplifier 3 through resistor 11), and bias circuitry for providing a constant bias to the input (V_G 5 into amplifier 1), and output amplifier stages (bias control voltage from terminal 8 through error amplifier 16 to gate terminal of stage 3, col. 4, lines 7-16), wherein the adjustable power control signal is adjusted to control the output power provided by the power amplifier circuitry by controlling the voltage supplied to the output amplifier stage (control voltage input to amplifier stage 3 being related to desired output RF power from amplifier stage 3, col. 5, lines 5-21).

Regarding claims 3 and 18, Kornfeld shows the power regulator being a voltage regulator (see col. 4, line 30 to col. 5, line 4).

Regarding claims 4 and 19, Kornfeld shows the power regulator being a linear closed loop voltage regulator (see col. 4, line 65 to col. 5, line 4).

Regarding claim 9, Kornfeld discloses a mobile terminal (see (see col. 1, lines 17-19, col. 4, lines 17-20, Fig. 5), comprising: a control system providing an adjustable power control signal to control output power fro transmitted radio frequency signals (see col. 5, lines 5-13), communication electronics associated with the control system (see col. 1, lines 29-33), and comprising: a power control circuitry (11-17) including a power regulator (11) providing an output voltage at an output node responsive to an adjustable power control signal (output of amplifier 3), power amplifier circuitry including an input amplifier stage (1), in series with an output amplifier stage (3), for amplifying a radio frequency signal (6), the input amplifier stage receiving power from a fixed voltage node (V_{DD} input into amplifier 1), and the output amplifier stage receiving

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power via the output node of the power regulator (input VDD into amplifier 3 through resistor 11), and bias circuitry for providing a constant bias to the input (V_{G5} into amplifier 1), and output amplifier stages (bias control voltage from terminal 8 through error amplifier 16 to gate terminal of stage 3, col. 4, lines 7-16), wherein the adjustable power control signal is adjusted to control the output power provided by the power amplifier circuitry by controlling the voltage supplied to the output amplifier stage (control voltage input to amplifier stage 3 being related to desired output RF power from amplifier stage 3, col. 5, lines 5-21).

Regarding claims 10 and 11, Kornfeld shows the power regulator being a voltage regulator as well as a linear closed loop voltage regulator (see col. 4, line 30 to col. 5, line 4).

Claim 24, which recites the method steps for implementing the circuitry of claims 1 and 17, is rejected for the same reasons as set forth in the rejection of claims 1 and 17 above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kornfeld et al.**

Regarding claim 15, Kornfeld meets all limitations as applied above in the rejection of claim 8, but fails to explicitly teach that the adjustable power control signal is V_{RAMP} . However, Kornfeld's V_{DD} going through the resistors 12, 13, 15 in order to maintain the desired relationship between the control voltage and the desired output RF power from the amplifier stage 3 (see col. 4, line 30 to col. 5, line 9) performs the functional equivalent of the adjustable power control signal.

Hence it would therefore have been obvious to one of ordinary skill in the art to use the circuit of Kornfeld to provide desired adjustable power control for the benefit of restraining gain variations while controlling the efficiency of the power amplifier.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayashi (6,201,440) discloses a power amplifier and control circuit.

Iida et al. (5,406,225) discloses a bias control circuit for a radio-frequency power amplifier.

Eddlemon (4,808,909) discloses a circuit for providing a constant current and a constant bias voltage.

Miyama et al. (5,574,991) discloses a circuit for controlling transmission power control using optimum bias voltage.


Schultz et al. (6,166,591) discloses a biasing circuit for supporting multiple output power levels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Appiah whose telephone number is 571 272-7904. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CA


CHARLES APPIAH
PRIMARY EXAMINER